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Peer influence and its impact on behavior among South Indian adolescents: A descriptive cross-sectional study

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Abstract:

BACKGROUND: Peer influence, the development of attitudes, and behavioral changes are some of the phenomenal changes that happen in adolescence.

MATERIALS AND METHODS: A descriptive cross-sectional study was undertaken to find out the association between peer influence and behavior among 355 adolescents within the age group of 16 to 18 years, randomly chosen from Pre-university schools of Udupi district, Karnataka using the Peer Influence Scale (PIS) and Strengths and Difficulties Questionnaire (SDQ).

RESULT: The results indicate that their peers highly influenced 43.9% of the participants. Meanwhile, 23.1% and 7.9% of adolescents who participated in the survey showed borderline and abnormal behavior, respectively. The association between peer influence and behaviour was assessed using the Chi-square test; the results (χ^2 =14.545, P=0.001) revealed that peers highly influence adolescent behavior and change adolescent conduct significantly.

CONCLUSION: Adolescents should be aware of the accepted and non-accepted behaviors in society and be wise in choosing the right peers who later influence their behavior. Parents need to check the conduct of their children and guide them in developing their identity.

Adolescents, behavior, child psychiatry, peer influence, strengths and difficulties questionnaire

Introduction

dolescence is a transitional phase Athat begins at the end of childhood, lasts till the beginning of adulthood, and is characterized by physical and mental improvement. The influence of friends, the development of attitudes, and behavioral changes are typical of this phase. When adolescents reach high school, much of their time is spent with their peers, and it is not astonishing that they assume a profoundly influential part in teenagers' lives. Peers play a significant role in the lives of an adolescent, especially in their day-to-day activities such as diet, dressing style and leisure activities.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and These influences become a concern when a person does something just to be accepted into a group, but when alone, he would not do any of those behaviors. The power and impact of companions are more prominent during puberty than at some other time throughout everyday life.^[1-3]

Peer influence has both its positive as well as negative sides. The closest peer attachments have a better developmental significance and encourage adolescent social skill development.[4-6] They might become assertive, try to explore new areas of interest or activities and become more productive at the same time; peer attachment might influence the adolescent to get into improper sleep, and

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the new creations are licensed under the identical terms. For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com unhealthy habits like drinking, and smoking^[7-11] or take part in antisocial behavior^[12,13] These behavioral, emotional and social problems, are categorized further as internalising and externalising symptoms. Internalising symptoms involve problems mainly within the self, like depression and anxiety. Externalising symptoms comprise problems with other people and social norms, like aggressive or rule-breaking behavior.^[14] Negative peer influence is significantly related to anxiety, depression, and other internalising and externalising problems.^[15]Adolescents also engage in self-harm and suicidal behaviors, and it is more likely to be seen in individuals who use psychoactive substances and with symptoms of conduct problems.[16-18] Sexual misconduct was also frequently seen in these individuals who use alcohol and tobacco. These risky behaviors of adolescents are associated with higher anterior cingulate cortex neural sensitivity, and they are particularly vulnerable to risky peer influence.^[19] Higher levels of hyperactivity, conduct problems, peer problems and negative emotional symptoms are seen in the age group of 12-14 years.^[8,20,21] Peer influence has an impact on adolescent behaviors. Hence, a cross-sectional study was conducted to find the association between peer influence and adolescent behavior.

Aim

The study aim to assess the peer influence and behavior of adolescents and find out the association between peer influence and adolescent behavior.

Materials and Methods

Study design and settings

This descriptive cross-sectional survey was conducted from January 2018 to February 2018 among 355 adolescents between the age group of 16 to 18 years randomly chosen from Pre-university schools of Udupi district, Karnataka, to assess the association between peer influence and adolescent behavior.

Study participants and sampling

Five Pre-University colleges in Udupi Taluk were selected through the lottery method without replacement, and adolescents were selected proportionally through random sampling from each school. The sample size was determined at a 95% confidence level using the following formula for single proportion = $Z^2_{\infty/2}P(1-P)/d2$ where the anticipated prevalence (P) and the anticipated margin of error (d) were 50% and 0.05. The demographic and social characteristics of the participants were collected using a proforma.

Data collection tool and technique

Very few data collection instruments were available for assessing peer influence, and most were not specific to the Indian culture. Hence, the researchers developed and used a 34-item Peer Influence Scale (PIS), having five-point Likert responses, namely, 1 = never, 2 = rarely, 3 = sometimes, 4 = often and 5 = always. The researchers conducted a focus group discussion with the adolescents and parents of adolescents before developing the PIS. The discussions were particularly focused on the experience of adolescents on how their peers influence them. Parents were also asked to discuss what they perceive as peer influence on their children. The PIS was validated by nine experts from child and adolescent psychiatry, psychiatric nursing, psychology, psychiatric social work, and general education. The initial draft contained 36 items; two items were deleted, and the final tool contained 34 items, and two items were deleted after consultation with the validators. The scale content validity index of PIS was 0.9. PIS measures the peer influence under the domains, namely dietary pattern, sleep pattern, physical exercise, personal appearance, late-night activity, emotions, conduct, pro-social behavior, pleasurable activities, life skills, and academics. Cronbach's alpha was calculated to check the tool's reliability, and the reliability coefficient was found to be 0.783. The minimum and maximum scores ranged from 34-170, with the highest score indicating highly influenced by peer groups. Scores were further classified into moderately influenced (34-80) and highly influenced (81-170).

The Strengths and Difficulties Questionnaire (SDQ)^[22] comprised of 25 items that assess adolescent behavior using a three-point Likert scale, namely, 0 = not true, 1 = somewhat true, and 2 = certainly true.^[23] It has five domains: emotional symptoms, conduct problems, hyperactivity, peer problems and pro-social behaviors. The aggregate score and each subscale were further classified into normal, borderline and abnormal behaviors. The emotional problem scale was scored as normal (0-5), borderline (6) and abnormal (7-10); the conduct problem scale was scored as normal (0-3), borderline (4) and abnormal (5-10), the hyperactivity scale was scored as normal (0-5) borderline (6) and abnormal (7-10), the peer problem scale was scored as normal (0-3) borderline (4-5) and abnormal (6-10) and the pro-social scale was scored as normal (6-10) borderline (5) and abnormal (0-4). The SDQ also includes a self-reported 'Impact supplement'; overall distress and impairment items were summed to generate the impact score, which ranges from zero to ten. The items included 'difficulties upset or distress the child', 'interfere with home life', 'interfere with friendships', 'interfere with classroom learning', and 'interfere with leisure activities'. The items were measured on a four-point Likert scale 0= 'Not at all', 0= 'Only a little', 1= 'A medium amount' and 2= 'A great deal'. The minimum and maximum scores possible were zero and ten. Permission was taken from the authors of SDQ for using the tool in the Indian setting.

All data collection instruments were in English and validated to be used in the Indian population. Nine experts from psychiatry, psychology, and psychiatric nursing assessed the tool for content validity. Descriptive and inferential statistics were computed using SPSS. The Chi-Square test was used to test the hypothesis.

Ethical consideration

The Institutional Ethics Committee of Kasturba Medical College and Kasturba Hospital (IEC No. 737/2017) approved the study on 12th December 2017 and registered in Clinical Trial Registry-India CTRI (CTRI/2018/01/011528). Formal permissions from the school authorities were also obtained prior to the study. The study processes were explained to the participants through an information sheet (Kannada or English), and consent forms (Kannada or English) were obtained from parents two days before the data collection.

Results

Sample characteristics

Of 355 adolescents, 192 (54.1%) belonged to 17 years, and 189 (53.2%) were females. Regarding their father's occupation, 152 (42.8%) were skilled workers, whereas 327 (92.1%) mothers were unskilled. The reported family income of 47.0% of the participants was between INR. 11,001 to 15,000. Around 53.2% of adolescents do not know how to drive, and 98.9% do not have a driving licence, but a few 138 (38.9%) use two-wheelers. Public transport was the medium of transport reported by 163 (45.9%) adolescents.

Peer Influence among adolescents

The data analysis showed that the mean peer influence among adolescents was 79.09 ± 18.291 , with minimum and maximum scores of 45 to 126. An analysis of levels of peer influence shows that peers influenced 199 (56.1%) adolescents moderately and 156 (43.9%) highly.

Behavior among adolescents

The behavior analysis [Table 1] using the SDQ showed that the mean behaviour score was 13.45 ± 4.409 , where 245 (69.0%) adolescents showed normal behavior, 82 (23.1%) adolescents exhibited borderline behavior, and only 28 (7.9%) showed abnormal behavior.

Impact score

Among the participants, 253 (71.3%) did not perceive themselves as having any emotional or behavioral difficulties, upset or distress. These participants were asked not to complete the 'impact questionnaire', and their impact score was considered zero, whereas 102 (28.7%) participants had emotional or behavioral difficulties, and their impact scores were calculated. Among them, 22 (6.2%) had an impact score of one; meanwhile, 25 (7.0%) and 21 (5.9%) participants had an impact score of two and three, respectively. Impact score-4 was obtained for 6 (1.7%), and Impact Score-5 was obtained for 14 (3.9%) participants. A few participants, 12 (3.4%), obtained a score of six and two participants obtained an impact score of eight. Among the 102 participants who reported difficulties, 88 (24.8%) had a medium impact (1-5), and 14 (3.9%) had a significant impact (6-10) caused by emotional and behavioral difficulties.

Association between peer influence and behavior among adolescents

Chi-square tests were computed between peer influence and behavior [Table 2] and showed a statistically significant association ($\chi^2 = 14.545$, P = 0.001 95% CI: 1.39 – 1.49). A domain-wise analysis of the behavior of adolescents showed that peer influence had a statistically significant association exists between peer problems ($\chi^2 = 8.959$, P = 0.011) and conduct problems ($\chi^2 = 25.355$, P = 0.001), Whereas no statistical association was found between emotional problems (χ^2 = 14.545, P = 0.153), hyperactivity ($\chi^2 = 4.498$, P = 0.106), and pro-social behaviour among adolescents ($\chi^2 = 0.077$, P = 0.962). The impact score analysis also revealed that peer influence is significantly associated with the impact score category among adolescents ($\chi^2 = 38.798$, P = 0.001).

Gender-wise analysis of peer influence and behavior

The gender-wise analysis demonstrated non-equivalence for gender in peer influence and three domains of behavior assessed through SDQ, namely, conduct problems, peer problems and pro-social behaviours. Peer influence score, conduct problems and peer problems were higher in males when compared to females, whereas pro-social behaviours were reported more in females. The data in Table 3 showed that there is a statistically significant difference (14.02) exists between the peer influence demonstrated between males and females ($t_{(df=353)}$ =14.02, CI 10.474-17.554). When analyzing the domains of behavior, 'conduct problems' were significantly higher in males ($t_{(df=353)}$ =2.378, CI.074-.778) with a mean difference of. 43. 'Peer problems' also were significantly higher among males ($t_{(df = 353)} = 2.507$, CI.091 -.754) with a mean difference of. 42. Meanwhile, there is statistically significant difference exist between females and males (.91) in demonstrating the 'pro-social behaviors' t_(df = 353) =4.909, CI. 1.279-.547).

The correlation coefficient computed between the peer influence and domains of behavior showed a difference according to gender [Table 4]. The correlation between peer influence and emotional symptoms in males (r = .248, P = .001) was higher when compared to females (r = .155, P = .033), Whereas there was no difference in the

SDQ Domains	Mean±SD	Classification	Frequency	Percentage (%)
Emotional Symptoms	3.49±2.01	Emotionally Stable Behavior	296	83.38
		Borderline behavior	36	10.14
		Abnormal Behavior	23	6.48
Conduct problems	3.49±1.69	Normal behavior	181	50.99
		Borderline behavior	98	27.61
		Conduct problems	76	21.4
Hyperactivity	3.26±1.17	Normal behavior	325	91.55
		Borderline behavior	17	4.79
		Hyperactivity	13	3.66
Peer problems	3.21±1.60.	Normal behavior	217	61.13
		Borderline behavior	109	30.7
		Peer problems	29	8.17
Pro-social behavior	7.20±1.79	Normal behavior	302	85.07
		Borderline behavior	28	7.89
		Abnormal behavior	25	7.04

Table 1:	Domain-wise	analysis	of behavior	among	adolescents	(<i>n</i> =355)
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Table 2: The association between peer influence and behavior among adolescents (*n*=355)

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Peer influence	Normal behavior (0-15)	Borderline behavior (16-19)	Abnormal behavior (20-40)	χ^2	df	Р
Moderately influenced. (34-80)	153	37	9			
Highly influenced. (81-170)	92	45	19	14.545	2	0.001*
*Significant at P=<0.05						

Table 3: Gender-wise analysis of peer influence and behavior among adolescents (n=355)

Variables	Gender		Mean	t	Р	95% CI	
	Male Mean±SD	Female Mean±SD	difference			Lower	Upper
Peer influence	86.55±18.106	72.53±15.809	14.02	7.785	0.001*	10.474	17.554
Behavior Domains							
Emotional symptoms	3.30±2.022	3.67±1.992	0.37	-1.741	0.083	-0.791	0.048
Conduct problems	3.72±1.606	3.29±1.749	0.43	2.378	0.018*	0.074	0.778
Hyperactivity	3.44±1.675	3.11±1.742	0.33	1.806	0.072	-0.029	0.687
Peer problems	3.43±1.585	3.01±1.583	0.42	2.507	0.013*	0.091	0.754
Pro-social behavior	6.71±1.792	7.62±1.711	0.91	-4.909	0.001*	-1.279	-0.547

*Significant at 0.05 level (df=353)

correlation between peer influence and conduct problems in males (r = .262, P = .001) and females (r = .285, P = .005). There was no significant correlation observed between other domains of behavior with the peer influence in both genders. The domain-wise analysis of behavior in males showed a low positive correlation exists between emotional symptoms with conduct problems (r = .362p = 0.001), hyperactivity (r = .262 P = .001) and peer problems (r = .350 P = .001). Meanwhile, in females' emotional symptoms were not correlated with the domains of behavior.

Discussion

The aim of the present study was to confirm the association between peer influence and the behaviors of adolescents. The influence of peers in adolescent life can significantly change the behavior of the individual. Peers prefer strong friendships from the opposite sex, and also they choose peers from similar socio-economic and cultural conditions. Similar interests and similar ages with equal positions of education and social class are the major determinants of having peer influence. Peers choose peers with similarities as friends or join groups with similar characteristics based on the process of selection similarity, and the dissimilar departs from the peer group through a process of peer group pruning or deselection.^[24,25]

The peers are similar and also share a higher conformity among themselves. This high conformity in early adolescents leads to higher rates of riskiness in everyday tasks.^[26] The adolescents adopt troublesome and maladaptive behaviors with the influence of peers.^[27] The preference of peers from the opposite sex may also

Variables	Peer influence	Emotional symptoms	Conduct problems	Hyperactivity	Peer problems	Pro-social behavior
Peer	-	0.155*	0.285*	0.201*	0.233*	0.147*
influence		P=0.033	<i>P</i> =0.001	<i>P</i> =0.005	<i>P</i> =0.001	<i>P</i> =0.044
Emotional	0.248*	-	0.146*	0.121	0.132	0.128
symptoms	<i>P</i> =0.001		<i>P</i> =0.046	<i>P</i> =0.097	<i>P</i> =0.070	0.078
Conduct	0.262*	0.362*	-	0.136	0.284*	-0.175*
problems	<i>P</i> =0.001	<i>P</i> =0.001		P=0.062	<i>P</i> =0.001	<i>P</i> =0.016
Hyperactivity	0.177*	0.262*	0.089	-	0.258*	-0.129
	P=0.022	<i>P</i> =0.001	<i>P</i> =0.252		<i>P</i> =0.001	<i>P</i> =0.078
Peer	0.090	0.350*	0.067	0.084	-	-0.194*
problems	<i>P</i> =0.249	<i>P</i> =0.001	P=0.392	<i>P</i> =0.282		P=0.008
Pro-social	-0.93	-0.028	-0.06	-0.258*	-0.22	-
behavior	<i>P</i> =0.231	<i>P</i> =0.719	<i>P</i> =0.441	<i>P</i> =0.001	<i>P</i> =0.775	

Table 4: Correlations coefficient calculated w	within peer influence an	nd domains of behavior	(SDQ) for females
(above diagonal) and males (below diagonal)	I)		

be viewed in terms of sexual behaviors, where many adolescents are influenced by their best friends and peers.^[28] Previous studies also reported a significantly greater likelihood of engaging in risky sexual activity by adolescents due to peer influence and approval.^[29] A study done by Geven *et al.*^[30] (2017) reported that boys showed more resistance to school when compared to girls because of the positive influence of the resistant behavior of their friends. The involvement of adolescents in high-risk behaviors can be protected through parental communication and monitoring.^[29] Peer influence can also be channelized to improve academics, personality as well as co-curricular skills.^[12,31]

The result of this study also showed a significant association between peer influence and peer problems. Affiliation with delinquent peers, peer rejection, and poor peer social skills are some of the peer problems reported by previous studies.^[30] The current study used SDQ for measuring emotional symptoms, conduct problems, hyperactivity-inattention, peer relationship problems, and pro-social behaviors.

The domain-wise analysis of behaviour in males showed that a low positive correlation exists between emotional symptoms with conduct problems, whereas, in females' emotional symptoms were not correlated with the domains of behavior. This phenomenon was also observed in a study conducted by Bøe *et al.*^[32] in 2016. They also reported that the correlation between emotional problems and conduct problems was higher for boys than girls. This may be because girls tend to show more emotional symptoms and less tantrums and obey more. There was a tendency for females to score higher in pro-social behaviors. The study by Bøe *et al.*^[32] also demonstrated that girls were more likely to endorse pro-social behaviors than boys.

Teachers and parents need to take multiple strategies to overcome the negative impact of peer influence on the behavior of adolescents. Resisting peer pressure also may lead to coercion, teasing, or taunting.^[33] Teaching adolescents resistance skills to prevent peer influence on undesirable behaviors is one of the most efficient strategies. Passive peer influence through imitation can also lead to undesirable behaviors, such as the use of psychoactive substances. School-based drug prevention programs, along with teaching resistance skills, can prevent undesirable behaviors.

Conclusion

The study concludes that there is a significant association between peer influence and behavior among adolescents. Adolescents should be aware of the accepted and non-accepted behaviors in society and be wise in choosing the right peers who later influence their behavior. Parents need to check the conduct of the individual and need to guide and motivate them in the process of developing identity.

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Conflicts of interest

There are no conflicts of interest.

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